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TE-2

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CNL Assignment - 5

Q.1. Whats socket? explain diff types.

→ Socket:

Its an end point of two way communication link b/w two programs running on the network. The sock mechanism provides a means of interprocess communication (IPC) by establishing named contact points b/w which communicatn takes place.

They're generally applied in client-server communication. The server creates a socket & attaches it to network port address & then waits for client to contact it.

Types:

1) Datagram socket:

This is type of network which has connectionless point for sending & receiving packets. its similar to mailbox.

2) Stream socket:

Its type of interprocess communication socket which provides a connection oriented, sequenced & unique flow of data. without record boundaries will well defined mechanisms for creating & destroying connections & for detecting errors.

Q.2. Differentiate betn TCP & UDP

TCP	UDP
1. It's communications protocol, using which data is transmitted b/w systems over the network. In this, the data is transmitted in form of packets. Includes error checking, guarantees delivery.	1. Its same as TCP except that this doesn't guarantee error checking & data recovery. UDP, data will be sent continuously, irrespective of issues in

2. Its connection-oriented	2. Its connection less
3. Data is transmitted in a particular sequence which means that packets arrives in-order at receiver end	3 There's no sequencing of data ordering is managed by the application layer.
4. Its slow & less efficient	4. Its faster than TCP & more efficient
5. Retransmission of data possible	5. Retransmission of data not possible.

Q.3. Explain FTP protocol.

→ FTP:

file transfer protocol is standard network protocol used to transfer computer files from one host to another over TCP based network, such as internet. FTP is built on client-server architecture & uses separate control & data connections between client & server. FTP users may authenticate themselves using a clear-text sign in protocol, normally in form of username & password but can connect annonymously if server is configured to allow it for secure transmission, FTPS — SSL/TLS may be used.

Q.4. write steps involved in establishing a socket on client & server side.

→ Creating a connection b/w client server using TCP:

- Server

1. Using create(), create TCP socket
2. Using bind(), bind socket to server address
3. Using listen(), put server socket in passive mode where it was for client to approach.
4. Using accept(), establish connection between client & server.
5. Goto step 3 & continue.

- client: Create TCP socket, Connect newly created client socket to server